



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,870	04/16/2004	Iddys D. Figueroa	200316700-1	8624
<div>22879      7590      07/26/2007</div> <div>HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400</div>				
			<div>EXAMINER</div> <div>SELLMAN, CACHET I</div>	
			<div>ART UNIT</div> <div>1762</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE</div> <div>07/26/2007</div>	<div>DELIVERY MODE</div> <div>PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/825,870	Applicant(s) FIGUEROA ET AL.	
	Examiner Cachet I. Sellman	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21, 54-58, 60, 62 and 81-99 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21, 54-58, 60, 62, 80-86, 88, 91-94, 96 and 99 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/22/2007</u>   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Acknowledgement is made of the amendment filed by the applicant on 5/8/2007, in which claims 1-2,4, 9, 12, 21, 54-55, 60, 62 were amended, claims 80-99 were added and claims were 22-53, 59, 61, and 63-79 were cancelled. Claims 1-21, 54-58, 60, 62 and 80-99 are currently pending in U.S. Application Serial No. 10/825,870.

#### ***Claim Rejections - 35 USC § 112***

The 35 USC 112 2<sup>nd</sup> paragraph rejections of claims 2,9,12,21, and 55 are withdrawn due to the applicant's amendments to the claims.

#### ***Claim Rejections - 35 USC § 102***

The 35 USC 102(e) rejection is withdrawn due to the applicant's admission that the prior art Lee et al. (US 6962715) was owned by the same assignee as the current application at the time the invention was made as the current application.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 55 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 55 recites the limitation "second layer of polymer" in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 5-14, 21, 57-58, 60, 80, 86, 88, 91, 94, 96 and 99 are rejected under 35 U.S.C. 102(e) as being anticipated by Compton et al. (US 2003/0059471).

Compton et al. discloses a process for making flakes, which can be used to orally deliver drugs. The flakes are formed of a polymer material [0016] and is dispensed using an inkjet followed by curing using heat or vacuum [0330-0335] and a pharmaceutical solution is deposited onto the flakes [0021] as required by **claims 1, 2 and 5**. Compton et al. further discloses a process for forming a slow release dosage of oral medication which comprises disposing a first layer of polymer structural material adjacent to an inkjet dispenser [0331, 0018, 0032-33]; jetting a jettable solution onto the structural material [0330] wherein the solution comprises a solvent for dissolving the solution into the structural material (the drug is allowed to penetrate into the flakes [0021], 0308) as required by **claim 54**. The structural material and the pharmaceutical solution can be applied in alternating layers [0044] as required by **claims 6-7**. The flakes (structural material) can be made of polyvinyl alcohol, poly(vinyl pyrrolidone) methyl cellulose, hydroxypropyl cellulose, hydroxypropylmethyl cellulose, polyethylene oxide, gelatin, pectin, polyvinylpyrrolidone, polyvinyl acetate, sorbose, a cellulose, a methyl cellulose, a HPMC [0054-0058] as required by **claims 8 and 57**. The flakes are

Art Unit: 1762

dispensed onto the substrate in discrete locations [0331] as required by **claim 9**. The drug is formed from a powder in a delivery agent [0086 and 0308] as required by **claims 10,11 and 58**. The drug component can be an antidiuretic, antihistamine, antihypertensive, antipsychotic, antiviral, blood glucose regulator, estrogen receptor sedative, or hypnotic [0093] as required by **claim 12**. The oral drug can further comprise of triazolam [0268], felodipine [0288], trandolapril, pergolide, flumazenil, risperidone, israpdipine [0292], sibutramine hydrochloride [0132], desmopressin acetate [0135], norgestimate [0255], metolazone [0150], estradiol, estrogens [0211], zaleplon and zolpidem tartrate [0268] as required by **claim 13**. The drug is applied as a solution wherein a solution comprises a component dissolved in a solvent as required by **claim 14**. Additional layers can be applied over the pharmaceutical solution to control the drug release [0042, 0044] as required by **claim 21**.

Compton et al teaches that multiple layers of structural material can be applied [0044, 0045] as required by **claims 80 and 91**.

The flakes are dispensed onto a belt or barrel (non adhesive surfaces) [0330] as required by **claims 86 and 94**. A flake can be considered a substrate and an additional layer of polymer (flake/ structural material) can be deposited representing the first layer of structural material wherein the flake is an edible material [0044-0045] as required by **claims 88, 96, and 99**.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 15-20, 60, 62 and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Compton et al. as applied to claims 11 and 58 above in view of Von Corswant (US 6602511).

Compton et al. teach that which is disclosed above. Compton et al. teach forming a pharmaceutical solution by mixing a vehicle, solvent and drug to solution. Compton et al. is silent concerning the formulation of the vehicle since it is obviously that any specific formula would depend on the specific drug intended for dosage form as required by **claims 15 and 60**.

Von Corswant ('511) teaches a method of forming non-toxic vehicles (col. 2, line 53) for administration of drugs such as Felodipine (col. 6, line 58) orally. Von Corswant ('511) teaches the vehicle including a solvent (col. 3, line 7), water (col.4, line 58) is

Art Unit: 1762

configured to dissolve the oral drug and the solvent, water, is configured to partially dissolve the structural material, i.e. a sorbitol (col. 3, line 25). Von Corswant ('511) further teaches the solvent is configured to not dissolve the structural material, which may be an organic solvent such as ethanol (col.4, line 65). Additionally, the vehicle includes surfactants (col. 4, line 56). Since Compton et al. teach a jettable vehicle component for drug solution, Von Corswant ('511) teaches a safe vehicle formulation for oral drug solution, Von Corswant ('511) would have reasonably suggested the formulations of vehicle for drug solution in the method of Compton et al. It would have been obvious to one of ordinary skill in the art to use the vehicles of Von Corswant ('511) in the method of Compton et al. with the expectation of successful results, because Von Corswant ('511) teach a safe, non-toxic vehicle for oral drug dosage form.

9. Claims 3,4, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Compton et al. as applied to claims 1 and 54 above in view of Lo et al. (US 2003/0065294).

Compton et al. discloses the use of an inkjet dispenser to dispense the structural material as well as the drug solution. However, Compton et al. is silent as to the type of inkjet dispenser used.

Lo et al. discloses a process for delivering bioactive agents using inkjet technology where a thermal inkjet technology can be used where liquids are heated to form drops and are propelled against the substrate; piezoelectric inkjet where a transducer changes volume to produce a drop (col. 5, line 49- col. 6, line 42).

Art Unit: 1762

It would have been obvious to one having ordinary skill in the art to modify the process of Compton et al. to include the inkjet printing techniques of Lo et al. One would have been motivated to do so because both disclose processes for dispensing bioactive substances and Compton et al. is silent as to the type of dispenser used and Lo et al. teaches operable inkjet dispensers.

10. Claims 81-82 and 92-93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Compton et al. in view of Compton et al. in view of Von Croswant as applied to claims 1 and 54 in further view of Bombor et al. (DD 217989A).

The teachings of Compton et al. in view of Von Croswant are as stated above. Compton et al. and Von Croswant are silent as to adjusting the solvent to control the release of the drug solution as required by claims 81-82 and 92-93.

Bombor et al. discloses a process for sustaining or controlling the release of a pharmaceutical solution. Bombor et al. teaches that by varying one or more solvents can affect the release of the drug from the film.

It would have been obvious to one having ordinary skill in the art to use the teaching of Bombor et al. in the method of Compton et al. in view of Von Croswant because both disclose created rate controlled drug releases from a film which uses a drug in a solvent in order to create a controlled release of the drug without affecting external influences and the rate can be controlled over a wide range.



***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cachet I. Sellman whose telephone number is 571-272-0691. The examiner can normally be reached on Monday through Friday, 7:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cachet I Sellman  
Examiner  
Art Unit 1762

cis

**William Phillip Fletcher III**  
Primary Examiner

July 23, 2007